8

STANDING COMMITTEE ON ENERGY (1996-97)

ELEVENTH LOK SABHA

PROBLEMS OF RAJASTHAN ATOMIC POWER STATIONS

DEPARTMENT OF ATOMIC ENERGY

[Action Taken by the Government on the Recommendations contained in the 37th Report of the Standing Committee on Energy (Tenth Lok Sabha)]

EIGHTH REPORT

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LOK SABHA SECRETARIAT
NEW DELHI

February, 1997/Magha, 1918 (Saka)

EIGHTH REPORT

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Presented to Lok Sabha on..... 4 MAR 1997
Laid in Rajya Sabha on.....

LOK SABHA SECRETARIAT
NEW DELHI

February, 1997/Magha, 1918 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON ENERGY (1996-97)

Shri Jagmohan — *Chairman*

MEMBERS

Lok Sabha

2. Shri Karia Munda
3. Shri Lalit Oraon
4. Prof. (Smt.) Rita Verma
5. Shri Gyan Singh
6. Prof. Om Pal Singh 'Nidar'
7. Shri Ravindra Kumar Pandey
8. Shri Muni Lal
9. Shri Manoj Kumar Sinha
10. Shri Sriram Chauhan
11. Shri Sriballav Panigrahi
12. Shri G. Venkataswamy
13. Shri Tariq Anwar
14. Shri Parasram Bhardwaj
15. Shri A.K. Panja
16. Shri Prithviraj D. Chavan
17. Shri Iswar Prasanna Hazarika
18. Shri Sandipan Thorat
19. Shri P. Kodanda Ramaiah
20. Shri Ram Kripal Yadav
21. Shri Anil Basu
22. Shri Haradhan Roy
23. Shri P.R.S. Venkatesan

24. Shri V. Ganesan
25. Shri N. Ramakrishna Reddy
26. Shri Gawali Pundlikrao Ramji
27. Shri Anand Mohan
28. Shri Prem Singh Chandumajra
29. Shri Chitta Basu
30. Shri Ramendra Kumar

Rajya Sabha

31. Shri Madhavsinh Solanki
32. Shri M. Rajasekara Murthy
33. Shri S.M. Krishna
34. Shri Ramji Lal
35. Shri Ved Prakash Goyal
36. Shri Lakhiram Agarwal
37. Shri Prem Chand Gupta
38. Shri Dipankar Mukherjee
39. Shri Vizol
40. Shri Gaya Singh
41. Smt. Basanti Sarma
42. Shri Rajendra Prasad Mody
43. Shri V.P. Duraisamy
44. Shri Rajnath Singh 'Surya'

SECRETARIAT

1. Shri S.N. Mishra — *Additional Secretary*
2. Smt. Roli Srivastava — *Joint Secretary*
3. Shri G.R. Juneja — *Deputy Secretary*
4. Shri A.S. Chera — *Under Secretary*
5. Shri S.R. Mishra — *Reporting Officer*

INTRODUCTION

I, the Chairman, Standing Committee on Energy having been authorised by the Committee to present the Report on their behalf, present this Eighth Report (Eleventh Lok Sabha) on the Action Taken by the Government on the recommendations contained in the 37th Report of the Standing Committee on Energy (Tenth Lok Sabha) on "Problems of Rajasthan Atomic Power Stations".

2. The Thirty-Seventh Report (Tenth Lok Sabha) of Standing Committee on Energy was presented to Lok Sabha on 7th March, 1996. Replies of the Government to the recommendations contained in the Report were received on 28th May, 1996.

3. The Report was considered and adopted by the Standing Committee on Energy at their sitting held on 18th December, 1996.

4. An analysis of the action taken by the Government on the recommendations contained in the 37th Report of the Committee is given in Appendix II.

NEW DELHI;
February 10, 1997
Magha 21, 1918 (Saka)

JAGMOHAN,
Chairman,
Standing Committee on Energy.

CHAPTER I

REPORT

The Report of the Committee deals with the Action Taken by the Government on the recommendations contained in the Thirty-Seventh Report (Tenth Lok Sabha) of the Standing Committee on Energy on "Problems of Rajasthan Atomic Power Stations" which was presented to Lok Sabha on 7th march, 1996.

2. Action Taken Notes have been received from the Government in respect of all the 4 recommendations contained in the Report. These have been categorised as follows:—

(i) Recommedations/Observations that have been accepted by the Government:

Sl. Nos. 1, 2 and 4

(ii) Recommendations/Observations which the Committee do note desire to pursue in view of the Government's reply:

Sl. No. 3

(iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee:

NIL

(iv) Recommendations/Observations in respect of which final replies of the Government are still awaited:

NIL

3. The Committee will now deal with action taken by the Government on some of their recommendations.

A. Closure of Rajasthan Atomic Power Station

Recommendation (Sl. No. 1)

4. The Committee had observed that establishment of the Rajasthan Atomic Power Station was a major effort in the country's endeavour

to develop technical capabilities in nuclear power generation. They had, however, expressed their concern regarding frequent shut down and closure of Rajasthan Power Station Units-1 and 2. The Committee were of the view that the efforts of the Department of Atomic Energy should not suffer owing to lack of financial support and needed funding must be provided by the Government for this purpose.

5. The Department of Atomic Energy in their reply have stated that the estimates for the fund requirements for re-furbishing RAPS-1 can be arrived at only after the techno-economic appraisal is completed by NPCIL and BARC.

In the context of RAPS-2, DAE stated that the refurbishment programme on RAPS-2 was estimated to cost Rs. 252.54 crores including interest during construction (IDC) which was to be funded on a debt/ equity ratio of 2:1. The cost estimate had been approved by Atomic Energy Commission (AEC) and approval of the Government is awaited. NPCIL has made necessary budget provisions during the year 1995-96 and 1996-97 for the programme and is making efforts to obtain balance equity from the Government of India for the subsequent project period. The refurbishment work including *en masse* coolant channel replacement at RAPS-2 is in progress which is expected to be completed during 1998-99.

6. The reply of the Department of Atomic Energy in the context of RAPS-I does not reflect upon the time schedule within which refurbishing of the Unit-I will be completed. The Department have also not stated by when the techno-economic appraisal will be completed by NPCIL and BARC. The Committee hope that refurbishing programme of the Unit-I of RAPS will be completed within a time-frame and the programme must not suffer due to paucity of funds. The Committee reiterate their earlier recommendation that efforts of DAE should not suffer due to lack of financial support.

B. Units 3 and 4 of RAPS

Recommendation (Sl. No. 4)

7. The Committee had observed that the cost estimates of Units-3 and 4 of RAPS which were under execution had gone up by nearly 200% on account of factors like price escalation, variation in foreign exchange rate, increase in taxes and duties and increase in scope of

work. The commissioning schedule of these units had also been revised and was expected to be delayed atleast by another year and a half. The Committee had expected that the Department of Atomic Energy would monitor the execution of the projects closely and provide all necessary support to ensure that the projects are commissioned without further cost and time over-runs.

8. The Department of Atomic Energy in their reply have stated that consequent on the inner containment (IC) dome failure at Kaiga Unit-1, there is constraint on construction of the IC structure at Rajasthan 3 & 4. The task of re-engineering of the IC dome is in progress. In order to minimise delays on account of clearance for inner containment (IC) dome, a steel canopy is planned to be erected in Reactor Building (RB) of Rajasthan 3 & 4 so that mechanical equipment erection, electrical and instrumentation works can be continued in parallel with construction of the re-engineered IC dome. The balance project activities have been divided into work packages so as to ensure better control and operational flexibility.

The Department of Atomic Energy have also stated in their reply that the progress of project activities is closely reviewed at project site as well as Nuclear Power Corporation of India Limited Headquarters & by the Department of Atomic Energy through periodical performance review meetings so as to identify problem areas and formulate corrective actions. Based on the present status of the project and the schedule on clearance for re-engineered IC dome, Rajasthan 3 & 4 are expected to be completed in 1998-99.

9. The Committee had expressed their concern at the escalation of cost estimate by 200% in case of units-3 and 4 of RAPS and had expected that the Department of Atomic Energy would monitor the implementation of the projects closely and provide all necessary support to ensure that the projects are commissioned without further cost and time over-runs. The Committee hope that the Department of Atomic Energy will continue the monitoring and ensure completion of the projects in 1998-99 as scheduled.

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Serial No. 1)

The Committee observe that establishment of the Rajasthan Atomic Power Station is a major effort in the country's endeavour to develop technical capabilities in nuclear power generation. Frequent shut downs and closure of Rajasthan Power Station Units-1 and 2 are a matter of concern to the Committee. The Committee are of the view that the efforts of the Department of Atomic Energy should not suffer owing to lack of financial support. The needed funding must be provided by the Government for this purpose as has been recommended by the Committee time and again in their earlier reports.

Reply of the Government

The estimates for the fund requirements for refurbishing RAPS-1 can be arrived at only after the techno-economic appraisal is completed by NPCIL and BARC.

The refurbishment programme on RAPS-2 is estimated to cost Rs. 252.54 crores including interest during construction (IDC) which is to be funded on a debt/equity ratio of 2 : 1. The cost estimate has been approved by Atomic Energy Commission (AEC) and approval of the Government is awaited. NPCIL has made necessary budget provisions during the year 1995-96 and 1996-97 for the programme and is making efforts to obtain balance equity from the Government of India for the subsequent project period. The refurbishment work including *en masse* coolant channel replacement at RAPS-2 is in progress which is expected to be completed during 1998-99.

[Department of Atomic Energy O.M. No. 4/1/9/96—PSUI dated May, 1996]

Comments of the Committee

(Please *see* paragraph 6 of the Report)

Recommendation (Serial No. 2)

Rajasthan Atomic Power Station Unit-1 is amongst the oldest of Nuclear Power Stations in the country. The unit is now being operated by the Nuclear Power Corporation on behalf of the Department of Atomic Energy. In the opinion of the Committee this is essentially an Experimental Station, a Research and Development Tester. The Committee are, therefore, of the view that rather than saddling the Nuclear Power Corporation with the financial liabilities of this station, Unit-1 of RAPP, now known as RAPS-1, should be treated as a Research and Development Station and be reverted to the Department of Atomic Energy. This would also facilitate budgetary support.

Reply of the Government

It is clarified that RAPS-1 has been retained with Government at the time of formation of NPCIL and the financial liabilities of RAPS-1 are entirely borne by DAE/the Government of India. NPCIL is entrusted with only the operation and maintenance of RAPS-2, the costs of which are fully met through the Government budgetary support. The question of reverting RAPS-1 back to DAE does not arise, as the same is already with the Government and the NPCIL is only operating/maintaining it on behalf of the Government of India.

[Department of Atomic Energy O.M. No. 4/1/9/96-PSUI dated May, 1996]

Recommendation (Serial No. 4)

"The cost estimates of Unit-3 and 4 of RAPS which are presently under execution have gone up by nearly 200% on account of factors like price escalation, variation in foreign exchange rate, increase in taxes and duties and increase in scope of work. The commissioning schedule of these units has also been revised and is expected to be delayed atleast by another year and a half. The Committee expect the Department of Atomic Energy to monitor the execution of the projects closely and provide all necessary support to ensure that the projects are commissioned without further cost and time over-runs".

Reply of the Government

Consequent on the inner containment (IC) dome failure at Kaiga Unit-1, there is constraint on construction of the IC structure at

Rajasthan 3 & 4. The task of re-engineering of the IC dome is in progress. In order to minimise delays on account of clearance for inner containment (IC) dome, a steel canopy is planned to be erected in Reactor Building (RB) of Rajasthan 3 & 4 so that mechanical equipment erection, electrical and instrumentation works can be continued in parallel with construction of the re-engineered IC dome. The balance project activities have been divided into work packages so as to ensure better control and operational flexibility.

The progress of project activities is closely reviewed at project site as well as Nuclear Power Corporation of India Limited Headquarters and by the Department of Atomic Energy through periodical performance review meetings so as to identify problem areas and formulate corrective actions.

Based on the present status of the project and the schedule on clearance for re-engineered IC dome, Rajasthan 3 & 4 are expected to be completed in 1998-99.

[Department of Atomic Energy: O.M. No. 4/1/9/96-PSUI, dated May, 1996]

Comments of the Committee

(Please *see* paragraph 9 of the Report).

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

Recommendation (Serial No. 3)

Similarly, Unit-2 of Rajasthan Atomic Power Station which has had repeated and considerable technical difficulties should also provide an opportunity to our scientists and nuclear engineer to devise various indigenous alternative, as also fabricate the needed machinery. If the Nuclear Power Corporation had been an establishment of long standing with commercial viability this kind of supportive, technological experimentation and innovation could have been sustained by them. The Committee feel that in light, however, of the very recent birth of the Nuclear Power Corporation of India Ltd. and its present financial constraints, the status of the Unit-2 of Rajasthan Atomic Power Station, as a commercial station should also be re-evaluated.

Reply of the Government

The performance of RAPS-2 has been good since commencement of commercial operation in 1981 upto end July 1994 when the unit was shut down for in service inspection of its coolant channels and their likely *en masse* replacement. RAPS-2 has achieved a plant load factor of about 60% during this period. The commercial viability of RAPS-2 in the light of the *en masse* coolant channel replacement programme and upgradation of systems has already been assessed by NPCIL. After capitalisation of the costs of refurbishment, the unit energy cost is estimated to be Rs. 1.86. NPCIL is confident of achieving good commercial performance of RAPS-2 in future.

[Department of Atomic Energy: O.M. No. 4/1/9/96-PSUI, dated May, 1996]

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

— NIL —

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWAITED

— NIL —

NEW DELHI;
10th February, 1997
21 Magha, 1918 (Saka)

JAGMOHAN,
Chairman,
Standing Committee on Energy.

APPENDIX I

EXTRACTS OF THE MINUTES OF THE NINTH SITTING OF STANDING COMMITTEE ON ENERGY (1996-97) HELD ON WEDNESDAY, THE 18TH DECEMBER, 1996 IN COMMITTEE ROOM 'E', PARLIAMENT HOUSE ANNEXE, NEW DELHI.

The Committee sat from 1630 to 1700 hours.

PRESENT

Shri Jagmohan — *Chairman*

MEMBERS

2. Shri Lalit Oraon
3. Prof. (Smt.) Rita Verma
4. Prof. Om Pal Singh Nidar
5. Shri Muni Lal
6. Shri Manoj Kumar Sinha
7. Shri Sriram Chauhan
8. Shri Ishwar Prasanna Hazarika
9. Shri Sandipan Thorat
10. Shri P. Kodanda Ramaiah
11. Shri Haradhan Roy
12. Shri Ramendra Kumar
13. Shri Ramji Lal
14. Shri Ved Prakash Goyal
15. Shri Dipankar Mukherjee
16. Smt. Basanti Sarma

SECRETARIAT

1. Shri G.R. Juneja — *Deputy Secretary*
2. Shri A.S. Chera — *Under Secretary*

2. The Committee considered and adopted the following Draft Action Taken Reports:—

(i) ** ** ** **

(ii) ** ** ** **

(iii) ** ** ** **

(iv) Action Taken by the Government on the recommendations contained in the 37th Report of the Standing Committee on Energy (1995-96) (Tenth Lok Sabha) on "Problems of Rajasthan Atomic Power Stations".

(v) ** ** ** **

3. The Committee also authorised the Chairman to finalise the above mentioned Reports and present the same to Parliament.

The Committee then adjourned.

** Paras (i), (ii), (iii) and (v) of the Minutes relating to consideration of four other Draft Action Taken Reports have not been included.

APPENDIX II

(*Vide* Para 4 of Introduction)

Analysis of Action Taken by the Government on the Recommendations contained in the 37th Report of the Standing Committee on Energy (Tenth Lok Sabha)

I.	Total No. of Recommendations made	4
II.	Recommendations that have been accepted by the Government (*vide* recommendations at Sl. No. 1, 2 & 4)	3
	Percentage of total	75%
III.	Recommendations which the Committee do not desire to pursue in view of the Government's replies (*vide* recommendations at Sl. No. 3)	1
	Percentage of total	25%
IV.	Recommendations in respect of which replies of the Government have not been accepted by the Committee	Nil
V.	Recommendations in respect of which final replies of the Government are still awaited	Nil